Field Naturalists Club of Ballarat

JUNE 1986

EXCURSION - NEWS SHEET

Meeting **June 6** : Stella Bedggood Memorial Lecture, Mr T. Pescott - "Are You a Conservationist? If No Why Not?"

Meeting **July 4** : Mrs. J. Barker - "Australian Daisies"

Excursion **June 7** : Hard Hills Road Area - Mr. P. Fry

Excursion **July 6** : Mosquito Flat - Dr. F. Harrap

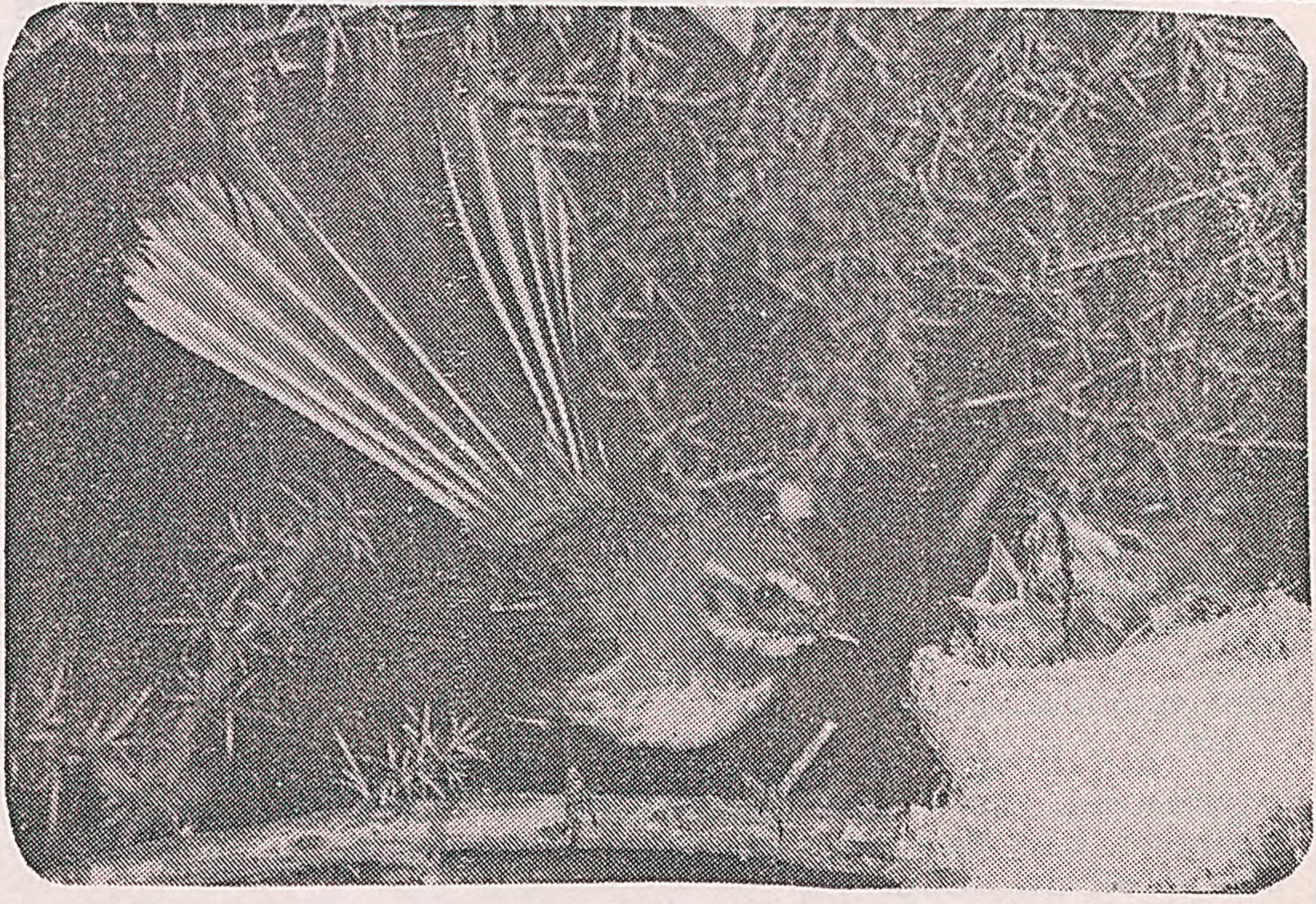

PHOTO: S. BEDGGOOD.

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Meetings, as specified, are held in the Art Building of the School of Mines and Industries Lydiard Street South, Ballarat, commencing 7.30pm

EXCURSIONS, AS SPECIFIED, COMMENCE FROM CROCKERS, Cnr. STURT and ARMSTRONG STREETS, BALLARAT, AT 9.30 am FOR FULL DAY OUTINGS

Excursion 4 May 1986
Mount William Central Victoria

Eleven Members and Friends went to the Aboriginal Quarry site at Mt. William which is situated in a most interesting area. The District contains the Quarry at Mt William, a large swamp area with an estimated 10,000 skeletal remains of prehistoric marsupials and, about 60 Km to the South, the Skull of Keilor Man was found.

Harvesters, Engineers and Farmers -- this does not sound applicable to a nomadic hunting people.

But one can picture well fed fishermen living in large villages, some made of stone, beside their eel and fish traps, and note that 10.000 years ago they had mastered sophisticated aerodynamics to make Boomerangs and that other wonder the spear thrower.

At Mt William was an engineering works. Using the crudest implements possible, Aborigines made axe head blanks which, when finally finished, were sharp enough to cut Eucalypts and the 'ironhard' timbers of the inland.

The Quarry workings cover approximately 40 hectares with many circular or oval pits and accumulated heaps of chips and flakes. The stone is Volcanic Greenstone, a hard, tough and fine grained stone suitable for making heavy duty axes.

The stone was probably extracted with fire, stone mauls and fire hardened sticks as levers.

It was then chipped into blanks and traded, the final trimming and grinding being done elsewhere; finished tools have not been found at Mt William

Mt William lacks the soft sandstone necessary for sharpening and there was limited water available.

However there is a large slab of sandstone at Mt Macedon 30 Km away with 31 grooves up to 2Cm deep, this suggests that it has had considerable use. The exposed slab is about 3 feet by 2 feet.

Mr A.W.Howitt's Aboriginal informant, Barak, witnessed its final operations. The last man responsible for working the site was Billi Billeri who died in 1846.

Tribes from up to 300 Km distance traded for axe blanks. The rate of exchange is unknown, except that in the 1840's the donor of one Possum rug received three blanks. Since there is much more effort and work in a possum rug, the two hours needed to make a blank indicates the high value put on these axes.

This Quarry, along with the other complexes, stand as mute testimony to the technical and orginisation abilities of the ancient Victorians in specialised industrial activity.

These are some of the reasons why this site is recognised as one of national importance. It is part of the cultural history of this country and is fully protected.

Oh! before I forget, four of us wandered up to the summit of Mt William and the views were great!

Note-

Greenstone is altered Basic Igneous Rock which owes its colour to the presence of Chlorite, Hornblende and Epidote.

L.F.

EXCURSION JUNE 6.

Please note that this months excursion is scheduled as one of our SATURDAY outings. As it is a half-day excursion, members are asked to assemble at Crockers Corner at 1.30pm.

SUPPER ROSTER - JULY MEETING.

N. Kierath, F. Williamson, L. Fink.

APRIL MEETING. KOALAS - Roger Martin

Roger talked about the general biology of koalas, their distribution and management.

Koalas have been here for about 25 million years. They are found near Townsville (Qld.) and down to the Darling Downs, north and north-west of Sydney. In Vic. they are widespread in the south and on some islands near Western Port Bay. They had disappeared from South Australia by the 1930s, but have been re-introduced in the Mt. Lofty Ranges. They are not known in recent times in W.A. (there are fossils) and have never been found in Tas.

Breeding occurs in the summer months and by Aug.-Nov, there are young in pouches or on the backs of females. There are very few twins. Occasionally one finds a young one on the back of a male koala. The young are in the pouch for about 5 months. After leaving the pouch the growth rate increases and at 7 months they have left the pouch for good.

There are no fertility problems. Koalas breed every year. Females are sexually mature at 2 years and males are probably sexually mature at 3 years - it is difficult for a young male to have access to females. They are not strong enough to hold a territory until they are 3-4 years old. AT San Diego Zoo one koala lived to be 17 years old, but in the wild the maximum age is probably about 15 years. There are some differences in the koalas from Qld. and those from the south.

Male koalas are not often photographed - they are not attractive. At 10 years males weigh 12½ kg. and females 8 - 9½ kg The males have pink splotches on the nose and a large chest gland. The secretion from the latter is used to " mark " a territory. Some humans can smell koalas. The female has two nipples, one is small and the other one is long and pokes out of the pouch. It is used by the young koala when it becomes too large to enter the pouch. At birth the young is the size of a jelly bean - it finds its way to the pouch, probably using a scent and by crawling against the force of gravity. It is attached to the nipple for 5 -6 months. The composition of the milk changes as the young develops. It is possible that more than one foetus is produced, but generally only one nipple is available. At weaning the diet changes dramatically from milk to eucalyptus leaves. The female produces a " pap " from the anus which the young koala eats - it provides the bacteria necessary to digest eucalyptus leaves. After a short time the growth rate increases rapidly.

Management studies have been carried out by the Zoology Department at Monash University. The first work was a study of the defoliation of trees near Walkerville (South Gippsland). Koalas prefer the leaves from fewer than 50 spp. of eucalyptus and in Vic. there are about 10 preferred spp. Around Walkerville only E. ovata (Swamp Gum) is the preferred sp. It was found that the ability to disperse is remarkable. There is a report that koalas have moved 29 km in 12 months ! The adult animals are caught fairly easily using a noose and making them fall out of trees by frightening them with a fluttering cloth! Small radio transmitters are attached to their necks and the signal that is sent out may be detected and used to plot movements over about 4 km.

The defoliation of trees at French Is. was reported as early as 1909 - 1912, but the matter was generally ignored. The effect was serious at Quail Is. - koalas cannot disperse from islands.

Disease. Koalas often show signs of a disease - this has often been grossly misrepresented. Ambrose Platt in 1937 stated that the disease would wipe out koalas. The organism responsible has been present in populations of koalas for a very long time and koalas are still with us !

The organism is a very small bacteria (Chlamydia psittaci) which lives inside cells. It invades the female reproductive tract and cysts are formed. Breeding may be interupted. Another effect is a conjunctivitis which can cause blindness. This is not very common. The number of deaths caused by motor vehicles and predators is much greater than those caused by this disease. Animals in the Brisbane Ranges may have an infection but are still able to breed. There is a state of ~~balnce~~ balance. The disease is not likely to kill all koalas.

Management must aim to prevent defoliation of the preferred spp. of gum trees - more than 1 animal to a hectare leads to defoliation . Territories overlap and females are probably promiscuous. Breeding is likely to be close. Normally koalas do not need water to drink.

MAY MEETING. RUSHES AND SEDGES.

Ted Errey was our guest speaker and in showing a collection of Rushes and Sedges explained how a club could compile such a record.

Sedges and Rushes have a close affinity with the Lily family. Grasstrees and Mat-rushes are in a class of their own.

Ted said he was not an authority on Rushes and Sedges but was very interested in them, an interest further fired on trips with Cliff Beuglehole.

Six families were covered in his talk, some are rare in this area, one is introduced (Great Mace), two are bullrushes with little difference apart from size. Male flowers are on top of the plant, female below; one is the thickness of a finger and the other somewhat larger.

These plants are important as they bind the soils around swamps and streams;they also create clear water making it better for Tadpoles and other aquatic creatures. Some,like the Multi Club-rush, are very suitable for fishponds and other water areas. Sixtyone of the sixtyfour Cyperaceae are found in the Ballarat area. For identification a magnifying glass is necessity.

JUNCACEAE- Rushes and Woodrushes.

Juncus (two Genera), some of these will grow to 8 feet and one to 15feet. The Sharp Rush is an introduced member as is the Jointed Rush. One is an alpine species.

This family has cylindrical pithy stems with basal leaves narrow and scalelike, the flowers have six glume like segments. There could be up to eight around the Ballarat area.

XANTHORRHOEAE- The Grasstrees andMat-rushes; there are about five in the district. The common one is the Spiny Headed Mat-rush which is related to the Grasstrees. They have at some time been included in the LILIACEAE.

JUNCAGINACEAE - These plants resemble the Juncus.

These are the Arrow Grass and Water Ribbons, which is the largest in the family. The Streaked Arrow Grass and Water Ribbons are the water lovers of the group, the others being found away from wetlands.

CYPERACEAE - These are the Sedges. Sword Sedges and Rapier Sedges, with sharp edges to their leaves, will cut hands very easily and are sometimes called cut grass.

Some have serrated or saw edges. These grow much taller and there is only one to be found in this area.

The Bog-rushes and Club-rushes are smallish plants, Club-rushes being the biggest group.

One is called the Thatch Sedge for obvious reasons.

The tassel Sedge is very ornamental as is the Red Fruited Sedge. The smaller families are Twig-rushes and the Spike-rushes.

The Bog-rushes, Club-rushes and some of the Mat-rushes are quite small. Ted suggested that we should, perhaps, respect these plants a little more for their soil binding and water purifying functions.

L.F.

FOR YOUR DIARY.

The Victorian Field Naturalists Association will be gathering at the Old Ballarat Travel Inn on the weekend of October 4-5. Outings to Piggoreet and Clarkesdale are planned, and a meeting and social evening for the Saturday.

FAMILY MYRTACEAE

GENUS EUCALYPTUS Flowers, fruits and often the leaves are very hard to obtain and cannot be readily used for identification.

There are 12 species in the Ballarat area and these may be placed in groups which can usually be distinguished by the kind of bark.

A. Gum Group - have smooth bark which is shed periodically in thin flakes or strips.

B. The others have thicker, rough barks which split, but do not peel off (i.e. the bark is persistent)

B1. Box Group. The outer bark is persistent over the whole trunk and is flaky, scaly or sub-fibrous

B2. Peppermint Group. The bark is persistent, greyish and finely interlaced or trellis like.

B3. Stringybark Group. Bark is thick and the long - fibred strands give the name " stringy bark ".

The 12 species are arranged as follows :-

GUMS :-	E. camaldulensis	River Red Gum.
(5)	E. Ovata	Swamp Gum.
	E. pauciflora	Snow Gum.
	E. rubida	Candlebark.
	E. viminalis	Manna Gum.
BOX.	E. melliodora	Yellow Box.
(2)	E. aromaphloia	Scent Bark. (not a true Box)
PEPPERMINT.	E. dives	Broad-leaved Peppermint.
(2)	E. radiata	Narrow-leaved Peppermint.
STRINGYBARK	E. baxteri	Brown Stringybark.
(3)	E. macrorhynca	Red Stringybark.
	E. obliqua	Messmate Stringybark.